In the Claims:

Claims 1-105 (Canceled).

- 106. (Original) A process for preparing (branched-alkyl) arylsulfonates comprising: hydrocracking and hydroisomerizing a paraffinic wax to produce an isoparaffinic composition comprising 0.5% or less quaternary carbon atoms, said isoparaffinic composition comprising paraffins having a carbon number of from about 7 to about 18, at least a portion of said paraffins being branched paraffins comprising an average number of branches per paraffin molecule of at least 0.5, said branches comprising a first number of methyl branches and optionally a second number of ethyl branches;
- exposing said isoparaffinic composition to a dehydrogenation catalyst in an amount and under dehydrogenation conditions effective to dehydrogenate said branched paraffins and to produce a mixture comprising branched olefins and unconverted paraffins, said branched olefins comprising 0.5% or less quaternary carbon atoms;
- contacting said branched olefins with an aromatic hydrocarbon in the presence of a quantity of an alkylation catalyst under alkylation conditions effective to alkylate said aromatic hydrocarbon, producing branched alkyl aromatic hydrocarbons comprising 0.5% or less quaternary carbon atoms;

sulfonating said branched alkyl aromatic hydrocarbons.

- 107. (Original) The process of claim 106 wherein said aromatic hydrocarbon is selected from the group consisting of one or more of benzenes, toluenes, xylenes, and naphthalenes.
- 108. (Original) The process of claim 106 wherein said aromatic hydrocarbon is benzene.
- 109. (Original) The process of claim 106 wherein said alkylation conditions are effective to predominately monoalkylate said aromatic hydrocarbon.
- 110. (Original) The process of claim 106 wherein said alkylation catalyst is selected from the group consisting of zeolites comprising pores having pore size dimensions of from about 4 to about 9 Å.

- 111. (Original) The process of claim 106 wherein said alkylation catalyst comprises one or more zeolites in acidic form selected from the group consisting of zeolite Y, ZSM-5, ZSM-11, mordenite, ZSM-4, ZSM-12, ZSM-20, offretite, gemelinite, cancrinite, and zeolites having an NES zeolite structure type.
- 112. (Original) The process of claim 106 wherein alkylation catalyst is a zeolite having an isotypic framework structure selected from the group consisting of NU-87 and gottardite.
- 113. (Original) The process of claim 110 wherein said zeolites have a framework molar ratio of Si to Al of from about 5:1 to about 100:1.
- 114. (Original) The process of claim 111 wherein said zeolite has said NES zeolite structure type and has a framework molar ratio of Si to Al of from about 5:1 to about 25:1.
- 115. (Original) The process of claim 110 wherein said zeolites comprise cationic sites, at least a portion of said cationic sites being occupied by replacing ions selected from the group other than alkali metal ions and alkaline earth metal ions.
- 116. (Original) The process of claim 115 wherein said replacing ions are selected from the group consisting of ammonium, hydrogen, rare earth metals, and combinations thereof.
- 117. (Original) The process of claim 115 wherein at least 50% of cationic sites on said zeolites are in hydrogen form.
- 118. (Original) The process of claim 115 wherein at least 90% of cationic sites on said zeolites are in hydrogen form.
- 119. (Original) The process of claim 110 wherein said alkylation catalyst comprises pellets comprising at least 50 %w of said zeolite.
- 120. (Original) The process of claim 106 wherein said quantity of said alkylation catalyst is from about 1 to about 50%w relative to the weight of said branched olefins in said mixture.
- 121. (Original) The process of claim 106 wherein said isoparaffinic composition comprises at least about 50 %w branched paraffins.
- 122. (Original) The process of claim 106 wherein said first number is at least about 50% of said branches.

- 123. (Original) The process of claim 106 wherein at least 75 %w of said branched paraffins in said isoparaffinic composition represent a range of molecules of which the heaviest molecules comprises at most 6 carbon atoms more than the lightest molecules.
- 124. (Original) The process of claim 106 wherein said isoparaffinic composition comprises paraffins having a carbon number in the range of from 7 to 35.
- 125. (Original) The process of claim 106 wherein at least 75%w of said isoparaffinic composition consists of paraffins having a carbon number in the range of from 10 to 18.
- 126. (Original) The process of claim 106 wherein at least 75%w of said isoparaffinic composition consists of paraffins having a carbon number in the range of from 11 to 14.
- 127. (Original) The process of claim 106 wherein said average number of branches is at least 0.7.
- 128. (Original) The process of claim 106 wherein said average number of branches is at most 2.0.
- 129. (Original) The process of claim 106 wherein said average number of branches is at most 1.8.
- 130. (Original) The process of claim 106 wherein said first number of methyl branches is at least 50% of said branches.
- 131. (Original) The process of claim 106 wherein said second number of ethyl branches is at most 10% of said branches.

Claims 132-154 (Canceled).

155. (New) A process for preparing (branched-alkyl) arylsulfonates comprising:

hydroisomerizing a paraffinic wax to produce an isoparaffinic composition comprising 0.5% or less quaternary carbon atoms, said isoparaffinic composition comprising paraffins having a carbon number of from about 7 to about 18, at least a portion of said paraffins being branched paraffins comprising an average number of branches per paraffin molecule of at least 0.5, said branches comprising a first number of methyl branches and optionally a second number of ethyl branches;

exposing said isoparaffinic composition to a dehydrogenation catalyst in an amount and under dehydrogenation conditions effective to dehydrogenate said branched

paraffins and to produce a mixture comprising branched olefins and unconverted paraffins, said branched olefins comprising 0.5% or less quaternary carbon atoms; contacting said branched olefins with an aromatic hydrocarbon in the presence of a quantity of an alkylation catalyst under alkylation conditions effective to alkylate said aromatic hydrocarbon, producing branched alkyl aromatic hydrocarbons comprising 0.5% or less quaternary carbon atoms;

sulfonating said branched alkyl aromatic hydrocarbons.

- 156. (New) The process of claim 155 wherein said aromatic hydrocarbon is selected from the group consisting of one or more of benzenes, toluenes, xylenes, and naphthalenes.
 - 157. (New) The process of claim 155 wherein said aromatic hydrocarbon is benzene.
- 158. (New) The process of claim 155 wherein said alkylation conditions are effective to predominately monoalkylate said aromatic hydrocarbon.
- 159. (New) The process of claim 155 wherein said alkylation catalyst is selected from the group consisting of zeolites comprising pores having pore size dimensions of from about 4 to about 9 Å.
 - 160. (New) A process for preparing (branched-alkyl) arylsulfonates comprising:
 - hydroisomerizing a paraffinic wax to produce an isoparaffinic composition comprising 0.5% or less quaternary aliphatic carbon atoms, said isoparaffinic composition comprising paraffins having a carbon number of from about 7 to about 18, at least a portion of said paraffins being branched paraffins comprising an average number of branches per paraffin molecule of at least 0.5, said branches comprising a first number of methyl branches and optionally a second number of ethyl branches;
 - exposing said isoparaffinic composition to a dehydrogenation catalyst in an amount and under dehydrogenation conditions effective to dehydrogenate said branched paraffins and to produce a mixture comprising branched olefins and unconverted paraffins, said branched olefins comprising 0.5% or less quaternary aliphatic carbon atoms;
 - contacting said branched olefins with an aromatic hydrocarbon in the presence of a quantity of an alkylation catalyst under alkylation conditions effective to alkylate

said aromatic hydrocarbon, producing branched alkyl aromatic hydrocarbons comprising 0.5% or less quaternary aliphatic carbon atoms; sulfonating said branched alkyl aromatic hydrocarbons.